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10. (Twice amended) A method of trimming aluminum sheet comprising:

securing the aluminum sheet at a cutting angle of [at least about 10] from about 10 to about 30 degrees adjacent a cutting blade wherein the cutting angle is measured from a plane perpendicular to a cutting direction of the cutting blade; and
trimming the aluminum sheet at the cutting angle with the cutting blade to thereby produce a trimmed aluminum sheet with substantially no slivers.

REMARKS

Claims 1-5 and 10-17 are pending in the application.

Independent Claims 1 and 10 have been amended to more clearly recite that the cutting angle ranges from about 10 to about 30 degrees. Basis for this recitation is provided in the application, for example, at page 17, lines 14-16 and Fig. 9. Amended Claims 1 and 10 more clearly recite the unexpectedly improved results of the present invention, namely, that the quality of trimmed aluminum sheet can be significantly increased by controlling the cutting angle within the recited range.

In the Office Action, the Examiner objects to Fig. 1. In a Communication dated May 21, 1999 (copy enclosed), Applicants previously submitted a proposed change to Fig. 1 in which Fig. 1 would be labelled as "PRIOR ART". Another copy of Fig. 1 showing the proposed change in red ink is submitted herewith. Approval of the proposed change is requested.

Claims 1, 10-12 and 17 stand rejected under 35 U.S.C. § 103(a) over Kravets '263. According to the Examiner, the Kravets '263 patent discloses a cutting device which performs every step of the claimed method, except for the metal sheet being aluminum. As shown in Figs. 7-9 and 10b of Kravets '263, a workpiece 100 is sheared at a large angle measured from the vertical direction. Such large cutting angles disclosed by Kravets '263 are not suitable for trimming aluminum sheet. As disclosed throughout Applicants' specification, and graphically illustrated in Fig. 9, aluminum sheet must be trimmed at controlled cutting angles in accordance with the present invention in order to produce high quality trimmed aluminum sheet.

By the present Amendment, independent Claims 1 and 10 have been amended to recite a cutting angle range of from about 10 to about 30 degrees. As

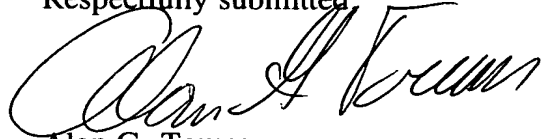
discussed throughout the specification and graphically illustrated in Fig. 9, Applicants have found the optimal cutting angles for trimming aluminum sheet which result in unexpectedly improved quality of the trimmed aluminum sheet, e.g., the elimination of slivers. As illustrated in Fig. 9, aluminum sheet behaves differently than steel sheet when it is trimmed. In contrast with steel sheet, Applicants have found that cutting angles of from about 10 to about 30 degrees yield the highest quality trimmed aluminum sheet.

The use of a cutting angle of from about 10 to about 30 degrees for trimming aluminum sheet, as recited in Claims 1 and 10, is not taught or suggested by Kravets '263. The reference does not disclose that aluminum sheet can be trimmed with the disclosed apparatus and method. Furthermore, the reference does not disclose that a cutting angle of from about 10 to about 30 degrees may be used. Moreover, Kravets '263 does not teach or suggest the unexpectedly improved results achieved in accordance with the presently claimed invention. Nowhere does the reference suggest Applicants' unexpectedly improved trimmed aluminum sheet quality which is achieved by keeping the cutting angle within a range of from about 10 to about 30 degrees. In fact, Kravets '263 effectively teaches away from Applicants' recited cutting angles by indicating that the best shearing results are achieved at much greater angles (see Fig. 10b and column 10, lines 22-27 of the reference). It is therefore submitted that amended Claims 1 and 10, and the claims that depend therefrom, are not obvious over Kravets '263.

In view of the foregoing amendments and remarks, it is submitted that Claims 1-5 and 10-17 are patentable over the prior art of record. Accordingly, an early notice of allowance of this application is respectfully requested.

In the event that any outstanding matters remain in connection with this application, the Examiner is invited to telephone the undersigned at (412) 566-6109 to discuss such matters.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Alan G. Towner".

Alan G. Towner

Registration No. 32,949

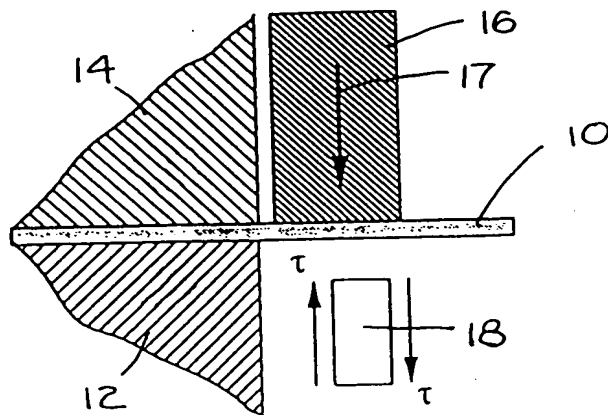
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PRIOR ART

FIG. 1

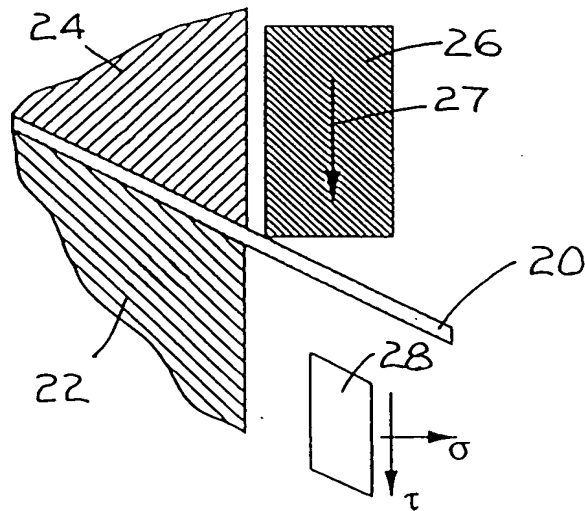


FIG. 2

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Not approved
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(Approved copy was ~~sent~~ previously
submitted in papers #9 & 11)